



TEST

Schwimmhilfen

Der letzte Schrott: Fünf Marken enthalten verbotene Weichmacher S. 66



Klonfleisch: Bald auf Ihrem Teller? S. 120

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ÖKO-TEST

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for Chung Shi

ÖKO-TEST Juli 2008

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TEST

Riester-Renten

Viele Angebote überzeugen nicht S. 140



TEST Plastic clogs

The great cheat



Foto: Pixelio.de/miraliki

The man with the drill moves quietly around. Not to hold back patients back from a quick escape but rather to have a more comfortable long working day. "Privately, I've been wearing brown Crocs for a long time and find that they are super", said dentist Dr. Patrick Albano. As soon as he heard that the soft plastic clogs were available in lab coat white, he grabbed them straight away. "You do sweat a little bit in them, but not as much as you would think in plastic", said the 32 year old. And, "they also look OK when worn bare-footed in comparison to Birkenstocks". Many think the same way as the young dentist. In the health and care professions, the plastic clogs are on their way to a takeover of the

The look of the all apparent Crocs and Co is being hotly debated this summer. For some of the perforated plastic shoes, one would be better off not touching them with fingers or feet, they are heavily polluted with toxic substances.

health shoe with cork sole. In shoe shops, whole walls are glowing with Crocs and similar looking shoes in every colour.

Originally the duck bill formed shoe with perforation holes was meant for water sports. Three sailing friends introduced their patent in 2002 at a boots exhibition and then quickly grew very rich: in 2007 their company profits amounted to a healthy 64.4 million dollars. Crocs and co. are now worn on the feet of beach tourists,

hobby gardeners, fashion conscious teenagers, feet and back sick seniors as well as Hollywood stars. From "walking on clouds" enthused the multi-cultural fans, from back pains that disappeared, the good aeration of the feet through the holes, less horny skin, better moods, great forms and loud colours. The shoes are easily washable, some manufacturers recommend a 40 degree wash in the washing machine or dishwasher.

However the new fashion

does attract some rather incomprehensible looks. For some it's enlightenment, for others, crocs are "a well aired plastic fortress for uncared summer feet" and the "summer sin" of the year (Stern), or simply "An insult for the eyes" (Süddeutsche Zeitung). Participants on Croc-hate forums and blogs on the internet, publish videos, in which the shoes are blown-up, destroyed and burnt with pleasure.

We bought 22 pairs of plastic clogs: expensive brands such as Crocs, Waldies or WOZ? for roundabout € 40, but also €5 clogs from the supermarket or furniture shops. Well known shoe brands such as Birki, Dockers or Romika have plastic shoes in their program, so they also came into our test.

Our recommendations

- ✓ Socks or footies can at least protect the skin a little from harmful substances. That is with Crocs and co. in fact less frowned upon than with sandals.
- ✓ From the start leave unpleasant smelling shoes in the shop. However: contaminated products can also be relatively neutral in smell.
- ✓ Clogs are only comfortable if they are big enough: when walking the foot should not nudge against the front of the shoe and at the back should have a thumb width of room.

Straight away after buying them, the smell that this small, colourful mound of shoes gave off made us perplexed and curious. Editors who lingered for a long time near the sets of plastic clogs complained of feeling slightly sick and headaches. To find out what was going on we had the clogs and their content substances taken apart in the laboratory.

The test results

- did not fit in with the happy, colourful, healthy image of the soft shoes. We can only recommend without restrictions, one brand. All others are contaminated with dubious or questionable substances. Six fail with "poor" and "unsatisfactory".
 - The good news: problematic softeners and organic tin compounds were only found in a few and then only in small traces.
 - This however looks different with the substance group of the polycyclic aromatic hydrocarbons (PAH): very high is the concentration amongst others, in the, according to the advertising "guaranteed harmful substance free", Second Living Clogs, Schildkröte, rot, von Strauss Innovation.
- Some representatives of the PAH group can act to modify genes, be progeny da-

maging and can cause cancer. Lawful regulations for PAH in commodities such as clothing are still missing. That it is possible to manufacture, uncontaminated plastic clogs, proves the red Chung Shi Dux. They are made from ethylene vinyl acetate, the same material as many other clogs in the test.

■ The manufacturer of the brown ladies clogs from Metro did not answer our question regarding the material of their product. The concentration of poisonous cadmium that we measured is according to the regula-

tions for the prohibition of chemicals, forbidden for a series of plastics and range of applications. Disappointing was also Birki's Fun Air BS Alpro-Cell, melone: it is heavily contaminated with lead and chrome.

The reaction of the manufacturers

■ "These values are not consistent with the self-conception of healthy and high quality products "Made in Germany"" as Birki Schuhe explained. The Birki's Fun Air BS Alpro-Cell, melone, as well as other similar models in the finish "melone", have therefore been taken from the market and deliveries stopped. Immediately ordered tests at the TÜV Rheinland, confirmed the amount of lead concentration in the ÖKO-TEST measured magnitude. The cause of the clog lead contamination was the dyeing of the plastic, according to the manufacturer Birki. All

Make your feet fit

- Run every day up and down a few times, successively on the heel, the middle foot, the front of the foot and the outside of the foot.
- Lift up a towel several times with the toes.
- Grip hold of marbles or pebbles with the toes and then let them fall until you can do it reliably.

plastic sandals and clogs, in all colours are currently being analysed for the, from us, tested contaminants.

■ Several manufacturers remarked that the, from us measured values, did not violate the law. With the PAH, the voluntary limitations of the industry were adhered to, as are applicable for products that carry the (GS) logo, Geprüfte Sicherheit. However, our test result showed: it can be better!

Meike Meyer

Interview



„Wonderfully wide and soft“

Dr. Thomas Pauly is a member of the executive board of the German Orthopaedic association and takes an exact look at his patients' shoes.

ÖKO-TEST: What is from an orthopaedic point of view to consider with regard to light, yielding plastic shoes?

Pauly: The plastic clogs have two advantages: they are wonderfully wide and they are wonderfully soft. To minimise the step pressure, we orthopaedics sometimes order a special step cushion that is attached to the shoe. That would be unnecessary with these yielding clogs. Most shoes are much too hard and when walking, the feeling of sinking in is missing that we have on a natural surface. When I ask patients to lay their forefoot, from the back on the shoe sole, I mostly see that

the shoe is smaller in the width than the foot. Consequence: the shoes chafe, squeeze and the feet muscles are weakened.

ÖKO-TEST: Are plastic clogs suitable for all uses?

Pauly: No. When you're underway on uneven surfaces with them, you slide backwards and forwards in the shoe. The toes try to find grip, foothold is missing altogether.

ÖKO-TEST: How does a shoe have to be built when I'm on my feet all day long?

Pauly: For such a shoe there are three criteria:

it should have a soft sole, for example an air-cushioned sole.

It should be a half-shoe that can be laced, which offers ideal stability.

It should be wide enough and allow the toes free movement. Good fitting sandals are a compromise during hot weather.



TEST Plastic clogs	Chung Shi Dux, rot	Betula Gelato EVA, strawberry	Cali Gear by Skechers Trinkets, silber	Crocs Cayman, lime	Damen Clogs, rot	Dockers by Gerli Clogs, violett
Supplier	Chung Shi	Betula	Skechers	Crocs	Grohmann Schuh Import (Schlecker)	Gerli
Price per pair in Euro	39,99	24,95	24,95	39,95	4,99	14,95
Manufactured in	Korea	China	China	China	China	China
Phthalates	no	no	no	no	no	no
Organic tin compounds	no	no	no	no	no	Traces
Polycyclic aromatic hydrocarbons (PAH)	Traces	Increased	Increased	Increased	Increased	Increased
PVC/PVDC/chlorinated plastics	no	no	no	no	no	no
Further questionable and/or contentious substances	no	no	no	no	no	no
Test result content substances	Excellent	Average	Average	Average	Average	Average
Additional deficiencies	no	no	no	no	no	no
Test result additional deficiencies	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Explanatory notes					2)	
Overall verdict	Excellent	Average	Average	Average	Average	Average



Galaxis Sports Clogs, hellblau	Holey Soles Explorer, lila	Idbyn Gummischuh, pink	Romiclog, rot	Sahara Clogs, orange	Unisex Trellos Clog, dark tangerine	Waldies Topas, rot	Clogs, grün, Best.Nr. 471790G
Fink Schuhe	APM Marketing/Holeys	Ikea	Romika	Deichmann	Lands' End (Ver-sand)	Vento-Star	Quelle
12,95	36,90	4,99	29,95	9,95	29,90	38,90	9,99
China	China	Vietnam	Thailand	China	China	Not specified	Italy
no	no	no	no	no	no	no	no
no	no	no	no	no	no	no	no
Increased	Increased	Increased	Increased	Increased	Increased	Increased	Increased
no	no	no	no	no	no	no	no
no	no	no	no	no	no	no	halogen organic compounds
Average	Average	Average	Average	Average	Average	Average	Satisfactory
no	no	no	no	no	yes	no	no
Excellent	Excellent	Excellent	Excellent	Excellent	Good	Excellent	Excellent
					1)		
Average	Average	Average	Average	Average	Average	Average	Satisfactory



TEST Plastic clogs	Herren Clogs, grün	Maui Fun Freizeitpantolette, rot	Beco Clogs, neongrün	HSM Clogs, orange	Second Living Clogs, Schildkröte, rot	Woz? Clogs Shark, arancio
Supplier	Kaufland	Maui Sports	Beco Beermann	HSM Schuhmarketing	Strauss Innovation	Woz?
Price per pair in Euro	4,99	7,99	7,00	9,95	7,50	39,90
Manufactured in	China	China	China	China	Not specified	China
Phthalates	no	no	no	no	no	Traces
Organic tin compounds	no	no	Traces	no	no	Traces
Polycyclic aromatic hydrocarbons (PAH)	Increased	Increased	Large increase	Large increase	Large increase	Large increase
PVC/PVDC/chlorinated plastics	no	yes	no	no	no	no
Further questionable and/or contentious substances	Cadmium	no	no	no	no	no
Test result content substances	Satisfactory	Satisfactory	Poor	Poor	Poor	Poor
Additional deficiencies	no	no	no	no	no	no
Test result additional deficiencies	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Explanatory notes						
Overall verdict	Satisfactory	Satisfactory	Poor	Poor	Poor	Poor



Birki's Fun Air BS Alpro-Cell, melone	Damen Clogs, braun
Birki Schuh	Metro
26,99	5,94
Germany	China
Traces	no
Traces	Traces
Increased	Large increase
yes	no
Chrome, Lead	Cadmium
Unsatisfactory	Unsatisfactory
no	no
Excellent	Excellent
4) 5)	3)
unsatisfactory	unsatisfactory

Bold type is deficiencies.

Glossary: explanations about the test parameters can be found on page 184.

Note: 1) PVC/PVDC/chlorinated plastics in the packaging. 2) We purchased the shoes in April 2008 at Schlecker. According to the seller it is not an own brand of Schlecker, the same product is also available for purchase elsewhere. 3) The cadmium concentration is higher than 100mg/kg. 4) The lead concentration is higher than 1.000mg/kg. According to the supplier the deliveries for Birki's Fun Air BS Alpro-Cell, melone as well as the similar models Fun, Carribean and Pacific, melone, have been stopped and the product in the finish "melone" has been taken off the market. According to a supplier expertise, a similar model (Carribean) in another colour (lime) is not contaminated with chrome or lead.

Ledgend: Products with the same results are listed in alphabetical order.

To a downgrading of respectively four steps leads: a) a much higher concentration of more than 1.000 ug/kg polycyclic aromatic hydrocarbons (PAH); b) more than 100 mg/kg cadmium. To a downgrading of respectively two steps leads: a) a higher concentration of more than 100 ug/kg polycyclic aromatic hydrocarbons (PAH); b) more than 1.000 mg/kg lead in combination with more than 100 mg/kg chrome. To a downgrading of respectively one step leads: a) PVC/PVDC/chlorinated plastics; b) more than 5 to 50 mg/kg cadmium; c) halogen organic compounds. Under additional deficiencies, leads to a downgrade: PVC/PVDC/chlorinated plastics in the packaging. The overall verdict is based on the test result, content substances. A test result in additional deficiencies that is "average" or worse, downgrades the overall verdict result by one step.

Test methods: Halogen organic compounds: binding of the organic halogens on activated carbon. Burning of the activated carbon in an oxygen flow. Micro coulometric determination of the halogen content. Heavy metals: Total disintegration in the microwave, element determination via ICP-MS. PVC/PVDC/chlorinated plastics in the product and in the packaging: X-ray fluorescence analysis. Polycyclic aromatic hydrocarbons (PAH): Solid-phase extraction, GC-MSD; it was tested to 24 PAK (PAH) following EC/EPA. Softeners/ Phthalates: GC/MS after extraction with acetone/ethyl acetate and derivatisation. Organic tin compounds: EtOH, Na-DDTC, NaBEt4, Hexane, GC-AED.

Purchase of the test products: April 2008

Supplier directory: page 189.

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time to **balance.**



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